PHILIPS

FR 940

Instructions for Use

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Important notes for users in the U.K.:

Mains plug
This apparatus is fitted with an approved moulded 13 Amp plug.
To change a fuse in this type of plug proceed as follows:
1 Remove fuse cover and fuse.
2 Fix new fuse which should be a BS1362 5 AMP, A.S.T.A. or BSI approved type.
3 Refit the fuse cover.

If the fitted plug is not suitable for your socket outlets, it should be cut off and an appropriate plug fitted in its place.

If the mains plug contains a fuse, this should have a value of 5 A. If a plug without a fuse is used, the fuse at the distribution board should not be greater than 5 A.

Note:
The severed plug must be disposed to avoid a possible shock hazard should it be inserted into a 13 A socket elsewhere.

How to connect a plug
The wires in the mains lead are coloured in accordance with the following code: blue = neutral (N), brown = live (L).
As these colours may not correspond with the colour markings identifying the terminals in your plug, proceed as follows:
1 Connect the blue wire to the terminal marked N or coloured blue or black.
2 Connect the brown wire to the terminal marked L or coloured brown or red.
3 Do not connect either wire to the earth terminal in the plug, marked E or ⏚ or coloured green or green-and-yellow.

Before replacing the plug cover, make certain that the cord grip is clamped over the sheath of the lead - not simply over the two wires.

If in doubt, consult a qualified electrician.

Thank you for selecting the Philips FR 940 Stereo Receiver.

A part of the state-of-the-art Philips 900 series, the FR 940 receiver is engineered to fulfil the task of generating powerful sound with the highest achievable definition, minimum noise and distortion The FR 940 is supported by features such as:

- A full-function remote control which can handle your entire PHILIPS 900 series HiFi system, as well as a TV set and a video cassette recorder.

- Enhanced System Intelligence (ESI), offering increased ease of operation by extensive communication between the various components of your system.

- 7 surround modes that can be selected to obtain special sound effects.

- High-precision, drift free quartz-locked digital tuning on two wavebands.

- 30 frequencies can be stored in the memory together with a programmable station name.

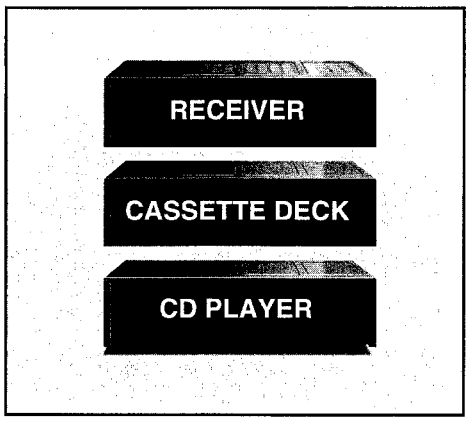
Please read this manual carefully ***before*** you attempt to connect or operate the amplifier.

This manual is divided into eight sections:

- **Installation**: explains how to set up your system. (pg. 3, 4, 5)
- **Operation**: explains how to use the major controls. (pg. 6, 7)
- **Amplifier**: gives more detailed information on operation of the amplifier section of your receiver, including special features. (pg. 7, 8, 9)
- **Tuner**: gives more detailed information on operation of the tuner section of your receiver, including special features. (pg. 9, 10)
- **Other possibilities**: explains the sleep-timer function and the demo mode (pg. 11)
- **System Aspects**: explains the Enhanced System Intelligence feature and its benefits. (pg. 11)
- **Remote Control**: gives detailed information on the operating functions of the system remote-control handset. (pg. 12, 13)
- **General Information**: includes maintenance information and technical data. (pg. 13, 14)

POSITIONING YOUR SYSTEM

The preferred order to stack the units of your system is shown in the diagram below.



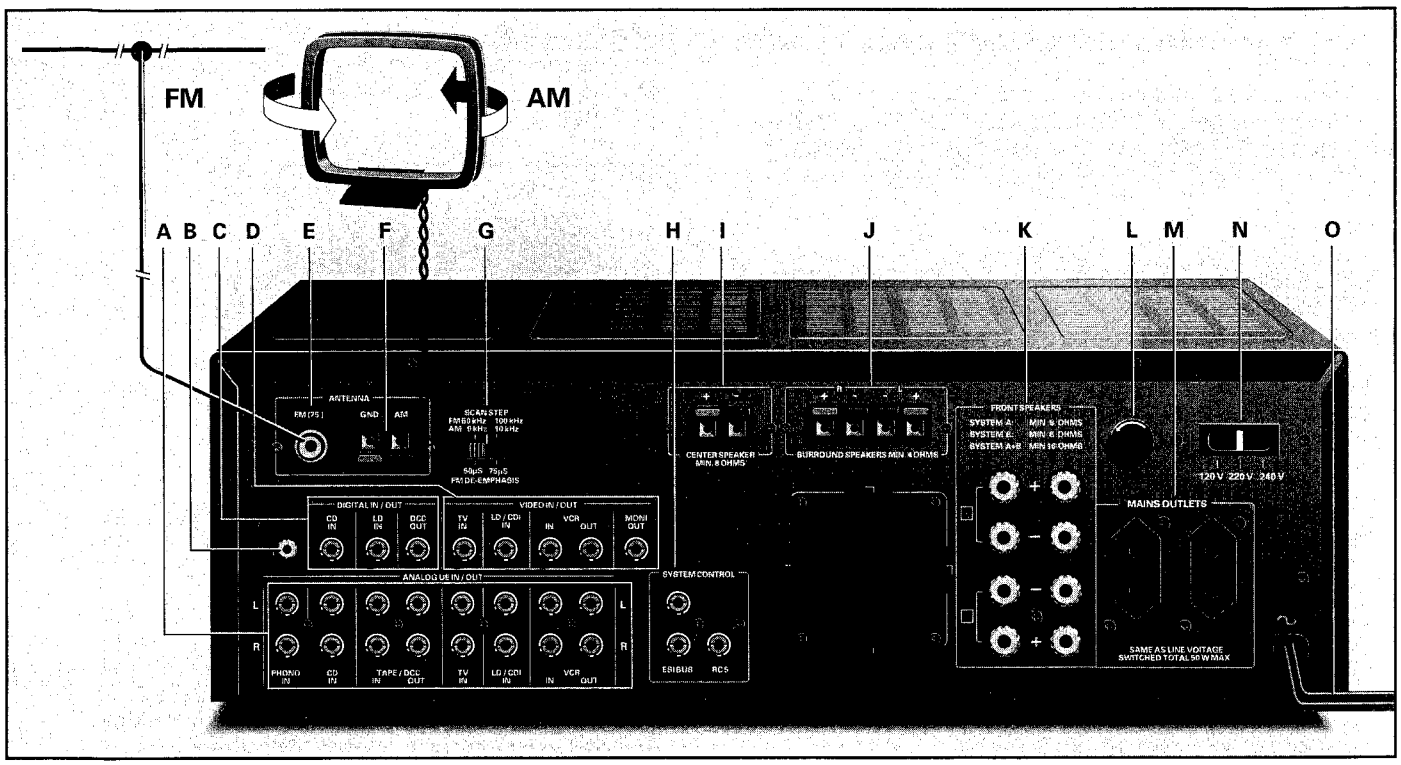
WARNING

Do not connect the set to the mains until all other connections have been made and the mains voltage (indicated on the type plate on the back cover) has been checked.

When positioning the unit, bear in mind that every receiver produces heat which must be able to dissipate freely. For this reason do not cover any vents and make sure that there is sufficient ventilation around the unit.

AC POWER SUPPLY

- Check that the mains voltage as shown on the type plate corresponds to your local mains supply. If it does not, consult your dealer or a Philips Authorized Service Center.
- If your unit has a voltage selector, make sure ***only*** to change the voltage in the POWER OFF position.
- Insert the plug of the mains lead into the wall socket. The power supply is now connected.
- To disconnect the set from the mains completely, remove the mains plug from the wall socket.



You only have to install your system once.
Please make the following connections (whenever applicable).
***NOTE:* SWITCH OFF THE RECEIVER BEFORE MAKING ANY CONNECTIONS.**

CONNECTIONS (see figure above)

A ANALOG IN/OUT
- **PHONO** – input sockets for connecting a record player with an 'MM' (Moving Magnet) cartridge.
- **CD** – input sockets for connecting a CD (Compact Disc) player.
- **TAPE/DCC** – input and output sockets for connecting a cassette deck or a Digital Compact Cassette deck.
- **TV** – input sockets for connecting the sound channel of a TV set.
- **LD/CDI** – input sockets for connecting a Laser Disc player or a CDI player.
- **VCR** – input sockets for connecting the sound channel of a video recorder and output sockets for extra sound recording equipment (e.g. a HiFi stereo video recorder, or cassette, or tape deck).

B GND ⏚ – for connecting the ground wire of a record player.

C DIGITAL IN/OUT
- **CD** – input socket for connecting the digital output of a CD player using a coaxial cable.
- **LD** – input socket for connecting the digital output of a Laser Disc player using a coaxial cable.
- **DCC** – output socket for connecting a Digital Compact Cassette recorder or another digital recording device.

D VIDEO IN/OUT
- **TV** – input socket for connecting the video output of a TV set.
- **LD/CDI** – input socket for connecting the video output of a Laser Disc player or CDI player.
- **VCR** – input and output sockets for connecting the video input and output of a Video recorder.
- **MONI. OUT** – output socket for connecting to the video input of a TV set.

E FM (75 Ω)
The FM (75 Ω) socket is used for connection to the Community or Cable Antenna System or to a roof-mounted FM antenna with an impedance of 75 ohms. If none of these are available, you may use the wire supplied for nearby stations (reception could be poor).

F GND/AM
For AM reception, connect the supplied wires to the GND and AM antenna terminals (one wire to GND and one wire to the AM terminal) and position the antenna for best reception.
Note: Do ***not*** place the AM loop antenna on the unit, as this unit employs a computing device which could cause interference.

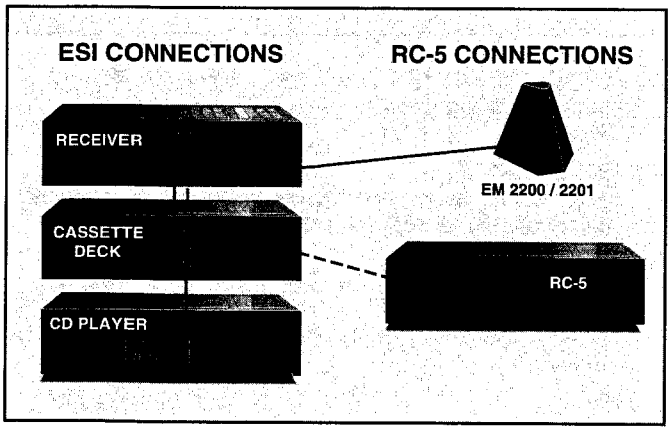
G FM DE-EMPHASIS SWITCH *(not all versions)*
Usually the FM DE-EMPHASIS switch has been preset in the factory for correct operation in your area.
If necessary you can change the FM DE-EMPHASIS switch according to the following table:

AREA	FREQUENCY	FM DE-EMPHASIS
North and South America	FM: 100 kHz AM: 10 kHz	75 µs
Other countries	FM: 50 kHz AM: 9 kHz	50 µs

Make sure that the receiver is switched off when changing the FM DE-EMPHASIS SWITCH

H SYSTEM CONTROL

- **ESI BUS** (Enhanced System Intelligence)(colored green) Remote-control input/output sockets for connection to the corresponding ESI sockets of other components in your HiFi system (e.g. the Philips 900 series)
  Connect the ESI socket to the ESI socket of external equipment which use the ESI remote control system.
  By using the ESI Bus, you can operate other components via the FR 940's I(nfra) R(ed) sensor.
- **RC-5 BUS** (colored orange) – remote-control input/output socket for connection to the corresponding RC-5 socket of a CD (Compact Disc) player or remote control receiver (e.g. EM 2200/2201).
  Connect the RC-5 socket to the RC-5 socket of the external equipment that uses the RC-5 remote control system. (see figure below)
  This socket has been added to maintain compatibility with older Philips Audio equipment.

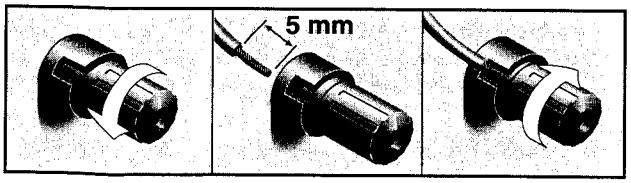


I CENTER SPEAKER – terminals for connecting a center speaker.

J SURROUND SPEAKERS – terminals for connecting a pair of surround speakers, impedance 8 ohms, to obtain a surround sound effect.
NOTE: Always connect ***two*** speakers to these terminals

K FRONT SPEAKERS A/B – terminals for connecting two pairs of speakers, impedance 8-16 ohms (L = left, R = right).

- One of the wires of a loudspeaker cable is marked with a color or rib. Connect the marked wire to the red terminal, the non-marked wire to the black one.
  Make sure that all loudspeakers are connected in the same way.



POWER

L FUSE HOLDER *(not all versions)*
for 110/127 V -> fuse type T4-0A-250 V.
for 220 V -> fuse type T2-0A-250 V.
See also VOLTAGE SELECTOR (**N**).

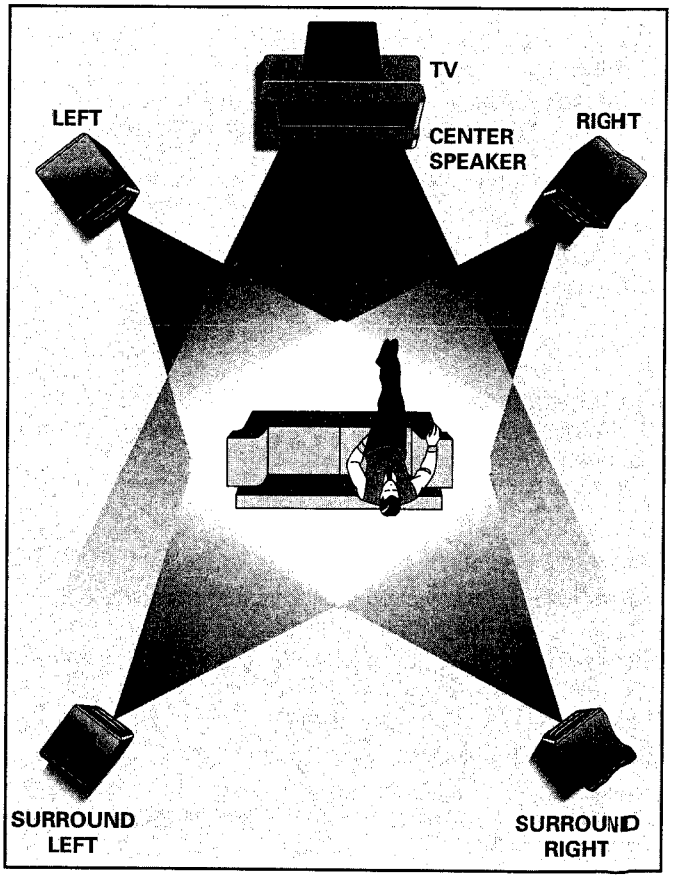
M MAINS OUTLETS – switched mains outputs for connecting mains plugs from various units such as cassette deck, CD player, etc. (maximum capacity is 50 W).

N VOLTAGE SELECTOR *(not all versions)*
For selecting the mains voltage: 110 V, 127 V, 220 V.
When changing the voltage setting, it is also necessary to change the mains fuse (**L**) to one of the correct rating: T4-0A-250 V for 110/127 V and T2-0A-250 V for 220 V.

O MAINS LEAD

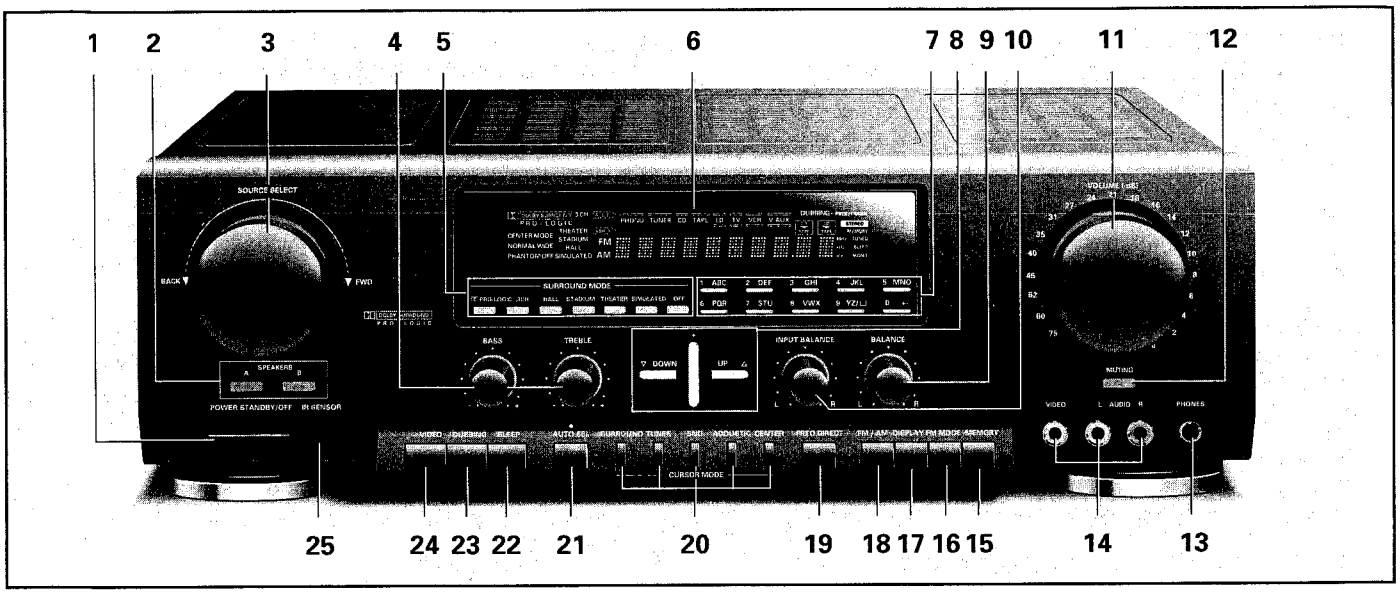
SPEAKER POSITIONING

To get the best surround sound effect in your home, place the speakers as shown below.
The left and right speakers should be about 40" from the TV set.
The center speaker should be above or below the TV set.
The rear speakers should be placed at normal listening ear level.
Note: to avoid interference with the TV picture, use only magnetically shielded speaker systems.



After making all necessary connections (some may not be applicable for your system set-up), your system is ready for use. In the next chapter we will describe how to operate your FR 940 receiver.

English



1 **POWER STANDBY/OFF** – for switching on to standby mode and for switching off.

2 **SPEAKERS**
A – for switching on and off a pair of speakers connected to the SPEAKER A terminals.
B – for switching on and off a pair of speakers connected to the SPEAKER B terminals.

3 **SOURCE SELECT** – for selecting the desired listening source

4 **BASS** – for adjusting the bass tones.
TREBLE – for adjusting the high tones.

5 **SURROUND MODE** – for selecting several surround modes: **DD PRO LOGIC**, **...3CH**, **HALL**, **STADIUM**, **THEATER**, **SIMULATED**, **OFF**.
Dolby Surround manufactured under license from Dolby Laboratories Licensing Corporation. 'Dolby' and the double D symbol DD are trademarks of Dolby Laboratories Licensing Corporation.

6 **DISPLAY**

7 **DIGIT KEYS**
– for selecting 30 preset stations.
– for entering data when programming station name and when using the direct tuning function.

8 **CURSOR KEYS**
▽ **DOWN**, △ **UP**, **–**, **+** – to be used in combination with the CURSOR MODE keys **20**.
– to adjust the surround modes.
– frequency up/down.
– preset selection.
– selecting a name when using the SND function.

9 **BALANCE** – for adjusting the balance of the volume between the left and right channels.

10 **INPUT BALANCE** – for adjusting the left and right input level for Dolby PRO LOGIC, DOLBY 3 STEREO and THEATER.

11 **VOLUME** – for adjusting the volume.

12 **MUTE** – for decreasing the volume by 20 dB (= factor 10).

13 **PHONES** – socket for stereo headphones.
• You may connect a pair of stereo headphones with 6.3 mm plug to this socket.
Inserting the plug will ***not*** disconnect the speakers.

14 **V-AUX in sockets** – input sockets for connecting extra video equipment e.g. a camcorder or videorecorder.

15 **MEMORY** – for opening and closing the memory when programming preset stations.

16 **FM MODE** – for selecting mono or stereo reception.

17 **DISPLAY** – for selecting the frequency or the station name to be shown on the display.

18 **FM/AM** – selecting reception of FM or AM stations

19 **FREQ.**(uency) **DIRECT** – for direct tuning to the station frequency

20 **CURSOR MODE**
For selecting different cursor modes which can then be manipulated with the CURSOR keys **8** (▽ DOWN, △ UP, –, +).

– **SURROUND**
Use the ▽ **DOWN**, △ **UP** keys to adjust the delay time of the rear channel.
Use the **–**, **+** keys to adjust the rear level (related to the front level.

– **TUNER**
Use the ▽ **DOWN**, △ **UP** keys to adjust the station frequency received down/up.
Use the **–**, **+** keys to select the next or previous tuner preset.

– **SND** – for entering a station name for a tuner preset.
Use the ▽ **DOWN**, △ **UP** keys to move the cursor in the display to the next or previous position.
Use the **–**, **+** keys to select the desired character (A-Z, I_I, +, –, *).

– **ACOUSTIC**
Use the ▽ **DOWN**, △ **UP** keys to select the center frequency in order to correct the bass reproduction: 80 Hz - 150 Hz - 250 Hz.
Use the **–**, **+** keys to select the desired correction level from 0 to +10dB.

– **CENTER**
Use the ▽ **DOWN**, △ **UP** keys to select the center channel mode: **NORMAL**, **PHANTOM**, **WIDE** or **CENTER OFF**.
Use the **–**, **+** keys to adjust the center level (related to the front level).

21 **AUTO SELECT** – for switching on and off the Enhanced System Intelligence (ESI) system (See system aspects).

22 **SLEEP** – to set a time period after which the system will automatically be switched to standby.

23 **DUBBING** – for recording from CD to TAPE or LD to VCR while listening to another source.

24 **VIDEO** – for selecting a video source which is different from the audio source.

25 **I**(nfra) **R**(ed) **SENSOR** – infrared remote control eye. For receiving signals from the remote control.

The display shows:

- the selected source: **PHONO, TUNER, CD, TAPE, LD, TV, VCR, V-AUX.**
- **DOLBY SURROUND, PRO LOGIC, THEATER, STADIUM, HALL, SIMULATED, OFF** – indicate the selected surround mode.
- **CENTER MODE, NORMAL, WIDE, PHANTOM** – light up during the DOLBY PRO LOGIC, DOLBY 3 STEREO and THEATER mode.
- **FM, AM** – indicate the selected waveband.
- The frequency of the tuned station is indicated in **MHz** (for FM) or in **kHz** (for AM).
- ▒▒▒▒▒ – indicates the frequency or station name.
- **DUBBING** – when the dubbing function (**23**) is used to make a recording while listening to another source.
  CD > TAPE – when recording from CD to TAPE source.
  LD > VCR – when recording from LD to VCR source.
- **PRESET SCAN** – appears when the scanning function on the remote control is used.
- **STEREO** – lights up when an FM stereo transmission is received
- **MEMORY** – flashes when the memory has been opened to store a preferred station.
- **TUNED** – lights up when a station is found and tuned in correctly.
- **SLEEP** – lights up when the sleep timer is active.
- **MONO** – lights up when the FM MODE key has been pressed to receive a mono signal.

POWER STANDBY/OFF

- Press the POWER STANDBY/OFF key (**1**) to switch on the power. The receiver will enter the standby mode and the indicator above this key will light up.
  When the receiver is switched to active mode (as described below in the chapters 'Wake-up from standby' and 'SOURCE SELECTION'), the respective indicators light up and the standby indicator is switched off. When a remote control command is received, this standby indicator flashes.
- To switch the receiver off press the POWER STANDBY/OFF (**1**) key again.

STANDBY

- Switching the FR 940 or your whole system to standby can only be done via the remote control.
- To switch a single source (e.g. CD) to standby:
- Select the source using the source keys on the remote control.
- The selected source will be switched to standby if the standby key is pressed briefly.
- If the standby key is kept pressed for more than approx. 1 second, the whole system will be switched to standby.
  All light indicators will be switched off with the exception of the standby indicator on the receiver.
  NOTE: If the whole system is switched to standby when a recording is active, the recording (or CD-dubbing) will be cancelled.

Wake-up from standby

There are several options to switch your system from standby back to the operating mode:
- turning the rotary SOURCE SELECT knob (**3**);
- pressing one of the following keys: SLEEP (**22**), VIDEO (**24**), FM/AM (**18**) or digit keys (**7**).
- selecting a source with your remote control.
- When AUTO SELECT is activated, several keys on equipment connected via the ESI BUS sockets that activate a play function may also be used as wake-up keys (e.g. PLAY, SCAN, PRESET).

SOUND CONTROL

- Adjust the sound volume with VOLUME (**11**).
- Adjust the stereo balance between the left and the right channels with BALANCE (**9**).
- Adjust the bass tones with BASS (**4**) and the high tones with TREBLE (**4**). ***WARNING:*** Extreme settings at high volume may damage your loudspeakers!
- Use the SURROUND MODE keys (**5**) to select the desired sound effect: PRO LOGIC, ... 3CH, HALL, STADIUM, THEATER, SIMULATED. Press the OFF key to switch the surround mode off.
- Press MUTE (**12**) if you want to decrease the volume by 20 dB.
- Press FM MODE (**16**) if you want to receive mono reception

SOURCE SELECTION

- When the receiver is in standby mode, it will be switched directly to operating mode as soon as the SOURCE SELECT knob (**3**) is turned.
- The receiver and the selected source (indicated on the display) will become active.
  NOTE: A selection is only made when you have stopped turning the knob (**3**) for more than one second (to prevent all sources becoming active while the knob is turning).
- By turning the SOURCE SELECT knob (**3**) one step to the left, you select the source to the left of the current source.
- By turning the SOURCE SELECT knob (**3**) one step to the right, you select the source to the right of the current source.
- You can also switch both the source and the receiver to the active mode by simply pressing 'PLAY' on CD or Deck or one of the tuner preset keys.

The sources that are selected at your receiver are indicated by the lighting of an indicator above the source name.
When a source is not selected, only the source name appears on the display.

Source selection via the remote-control handset

- Press (***for more than 1 second***) the respective source key on the remote control.
  The selected source and the receiver will become active.

Selecting a digital source

- When you use the SOURCE SELECT knob to select a digital source (CD or LD, connected via the digital sockets), the display indication changes to CD-DIGITAL or LD-DIGITAL to indicate that a digital signal is present.

VIDEO SOURCE SELECTION

Normally the video source follows the selected audio source when possible.
When you change the audio source with the SOURCE SELECT knob from e.g. TV to VCR the video source changes accordingly.
By pressing the VIDEO key (**24**) you can select a video source which is different from the audio source.
This is useful when you want to listen to the radio and watch your TV at the same time.
Each time you press the VIDEO key (**24**) again the next source is selected: LD > TV > VCR > V-AUX

As soon as you turn the SOURCE SELECT knob so that the audio source is the same as the video source, the sources will be linked and the video source will follow the audio source again.

English

SURROUND MODE

With the SURROUND MODE keys (**5**) you can select 7 different surround modes: **DD PRO LOGIC, ...3CH, HALL, STADIUM, THEATER, SIMULATED, OFF**.

DOLBY PRO LOGIC; choose this setting for playback of movies and music (especially Laser Discs, videocassettes and TV broadcasts with DOLBY SURROUND sound). Not only does Dolby Pro Logic surround you with sound, it also gives you a clear perception of the position and direction of the sound. Make sure you 'Speaker Positioning' is correct (page 5).

DOLBY 3-STEREO (...3CH): choose this setting for playback of movies and music (especially Laser Discs, videocassettes and TV broadcasts with DOLBY SURROUND sound), when not using rear speakers. You get a clear perception of the position and direction of the sound.

HALL: with this setting, you get the spacious effect of a concert hall when playing stereo (but not mono) source material.

STADIUM: the reverberation and open air atmosphere of a rock concert or sporting event is created by this setting, when playing stereo (but not mono) source material.

THEATER: this setting creates the same intimate feeling as you get in a theater when watching plays, musicals and solo acts.

SIMULATED: this setting gives you spatial surround sound when playing mono source material.

OFF: switches off the center and rear speakers for normal stereo operation.

Note: Dolby Pro Logic and Dolby 3-Stereo will not work properly if the signal passes through a graphic equalizer. Please refer to your equalizer user manual for guidance on switching off (or defeating) the equalizer.

When you select a SURROUND MODE the respective name appears on the display. The SURROUND MODE is switched off when you press the OFF key.
Each mode has programmed values for center-mode, center and rear levels and for rear channel time delay (as appropriate). With the CURSOR MODE and the ▽ DOWN, △ UP, + – keys your can set other values. These values will then be kept in the memory until they are changed again. Increasing the rear delay time expands the perceived listening area, and vice versa. The various values that can be adapted in the different surround modes are described next:

DOLBY PRO LOGIC:
- Press the SURROUND key (**20**).
  Use the ▽ DOWN, △ UP keys to adjust the delay time of the rear channel.
  Use the –, + keys to adjust the rear level (related to the front level.
- Press the CENTER key (**20**).
  Use the ▽ DOWN, △ UP keys to select the center channel mode: **NORMAL, PHANTOM, WIDE** or **CENTER OFF**.
  Use the –, + keys to adjust the center level (related to the front level).
- Press the ACOUSTIC key (**20**).
  Use the ▽ DOWN, △ UP keys to select the frequency range in order to optimize the bass reproduction to your room acoustics: 80 Hz, 150 Hz, 250 Hz.
  Use the –, + keys to select the desired correction level from 0 to +10dB.

INPUT BALANCE ADJUSTMENT

Use the INPUT BALANCE control (**10**) to balance the DOLBY PRO LOGIC input levels.
- Play dialogue from a movie on videocassette or Laser Disc.
- Press the CENTER key (**20**).
  Use the ▽ DOWN, △ UP keys to select CENTER OFF.
- While sitting in the normal listening position, adjust for minimum audible dialogue from the left and right speakers.
- Use the ▽ DOWN, △ UP keys to select:

– NORMAL if the center speaker has low (20W) rating.
– WIDE BAND if the center speaker has high (same as left and right speakers) rating
– PHANTOM if no center speaker is installed.

TEST TONE

Use the remote control TEST TONE function to obtain the correct balance between the levels of the left, right, center and rear speakers in the DOLBY PRO LOGIC mode.
- Press the TEST TONE key on your remote control.
- You will hear a test tone from the left, center, right and rear speakers in turn, in a repeating cycle.
- While sitting in the usual listening position, adjust the level of each speaker until they all sound equally loud.
  Use the BALANCE control (**9**) to adjust the left and right speaker levels, the CENTER key (**20**) and CURSOR + and – keys (**8**) to adjust the center speaker level, and the SURROUND key (**20**) and CURSOR + and – keys (**8**) to adjust the rear speaker level.
- When you are satisfied with the levels, press the TEST TONE key on your remote control again to turn off the test tone.

DOLBY 3-STEREO (...3CH LOGIC)
- Press the CENTER key (**20**).
  Use the ▽ DOWN, △ UP keys to select the center channel mode: **NORMAL, WIDE** or **CENTER OFF**.
  Use the –, + keys to adjust the center level (related to the front level).
- Press the ACOUSTIC key (**20**).
  Use the ▽ DOWN, △ UP keys to select the frequency range in order to optimize the bass reproduction to your room acoustics: 80 Hz, 150 Hz, 250 Hz.
  Use the –, + keys to select the desired correction level from 0 to +10dB.

HALL
- Press the SURROUND key (**20**).
  Use the ▽ DOWN, △ UP keys to adjust the delay time of the rear channel.
  Use the –, + keys to adjust the rear level (related to the front level.
- Press the ACOUSTIC key (**20**).
  Use the ▽ DOWN, △ UP keys to select the frequency range in order to optimize the bass reproduction according to your room acoustics: 80 Hz, 150 Hz, 250 Hz.
  Use the –, + keys to select the desired correction level from 0 to +10dB.

STADIUM
- Press the SURROUND key (**20**).
  Use the ▽ DOWN, △ UP keys to adjust the delay time of the rear channel.
  Use the –, + keys to adjust the rear level (related to the front level).
- Press the ACOUSTIC key (**20**).
  Use the ▽ DOWN, △ UP keys to select the frequency range in order to optimize the bass reproduction according to your room acoustics: 80 Hz, 150 Hz, 250 Hz.
  Use the –, + keys to select the desired correction level from 0 to +10dB.

THEATER
- Press the SURROUND key (**20**).
  Use the ▽ DOWN, △ UP keys to adjust the delay time of the rear channel.
  Use the –, + keys to adjust the rear level (related to the front level).
- Press the CENTER key (**20**).
  Use the ▽ DOWN, △ UP keys to select the center channel mode: **NORMAL**, **PHANTOM**, **WIDE** or **CENTER OFF**.
  Use the –, + keys to adjust the center level (related to the front level).
- Press the ACOUSTIC key (**20**).
  Use the ▽ DOWN, △ UP keys to select the frequency range in order to optimize the bass reproduction according to your room acoustics: 80 Hz, 150 Hz, 250 Hz.
  Use the –, + keys to select the desired correction level from 0 to +10dB.

SIMULATED
- Press the SURROUND key (**20**).
  Use the ▽ DOWN, △ UP keys to adjust the delay time of the rear channel.
  Use the –, + keys to adjust the rear level (related to the front level.
- Press the ACOUSTIC key (**20**).
  Use the ▽ DOWN, △ UP keys to select the frequency range in order to optimize the bass reproduction according to your room acoustics: 80 Hz, 150 Hz, 250 Hz.
  Use the –, + keys to select the desired correction level from 0 to +10dB.

GENERAL

- Select the waveband by pressing the FM/AM key (**18**) until the desired waveband appears in the display.
- Tune to a radio station or select a preset number.
  The correct procedure is described in the following chapters.
- While tuning the audio signal will be muted to eliminate interfering background noises. When a station is found, the audio signal will be set to normal volume again.
- When STEREO appears in the display , you are receiving an FM-stereo transmission. A disturbing noise, due to a weak FM-stereo signal, can be suppressed by pressing FM MODE (**16**).
  MONO will appear on the display and you will hear the FM program in mono.
  A stereo station can be stored in mono or in stereo.

TUNING

AUTOMATIC TUNING

- Press the tuning UP △ or DOWN ▽ key (**8**) for more than 0.5 seconds. Then release the button. The tuner will now search until a station of sufficient strength has been found. The display shows the tuned frequency and the word TUNED appears.
- If the station found is not the desired one, simply repeat this operation.
  Weak stations are skipped during automatic tuning.
  They can be tuned to manually.

MANUAL TUNING

Manual tuning is useful when you already know the frequency of the desired transmitter (e.g. from your programme guide).

With the digit keys (7)
- Press the **FREQ.**(uency) **DIRECT** key (**19**).
  ENTER FREQUENCY will appear on the display for a few seconds.
  The display will then show 'FM—.–MHZ' or 'AM—kHz'.
- Enter the desired frequency with the digit keys (**7**).
  As soon as you have entered the last digit, the tuner selects this frequency and the station becomes audible.
- Entry of the tuning frequency will automatically be interrupted if no key is pressed for 90 seconds, or if a key other than the digit keys is pressed. The receiver will return to the previous frequency.

With the TUNING UP △ / DOWN ▽ keys
- Keep the TUNING UP △ or DOWN ▽ key (**8**) pressed down until you approach the required frequency.
- If you now briefly press TUNING UP △ or DOWN ▽ the frequency will be changed by one step each time until the right frequency has been reached or until optimum reception is obtained. If the station found is strong enough, the word TUNED appears on the display.

Note: When tuning to a frequency that has been stored as a preset station, the number and station name (if any) of this preset appears on the display.

English

PRESET STATIONS

You can store 30 preferred stations in the memory of the tuner. This enables you to find your favorite stations quickly and easily. The preset numbers can be selected with the digit keys.

Programming of preset stations

- Press the MEMORY key (**15**) to open the memory. The word MEMORY starts flashing on the display.
- Tune either automatically or manually to the frequency to be stored (as described under TUNING)
- If the display shows no preset number, the frequency shown has not yet been stored in the memory.
- Select a memory location number (1 to 30) with the digit keys (when selecting a 2-digit number, press the second digit key within 1.5 seconds).
- Press the MEMORY key (**15**) again to enter the frequency in the memory. MEMORY disappears from the display.
  A stored frequency is erased from the memory by storing another frequency in its place.

Tuning to preset stations

- Select the desired preset number with the digit keys (**7**) (when selecting a 2-digit preset station, press the second digit key within 1.5 seconds).
  You will now receive the selected station and the display will show the preset number, the tuned frequency or the station name.
- Preset stations can also be selected with the tuning + or – keys (**8**):
  First, select the TUNER with the CURSOR MODE keys (**20**).
  Press + briefly to select the next preset number.
  Press – briefly to select the previous preset number.
- If you keep + or – pressed down for more than 0.5 seconds the preset number will be increased (or decreased) every 0.5 second.

STATION NAME

You can manually enter names for preset stations which will be shown on the display when you are tuned to that preset number.
The name can be a combination of figures, letters, symbols and spaces and can be made up of a maximum of 5 characters.

- Choose a preset number with the digit keys (**7**).
- Press the SND key (**20**).
  The display shows ENTER NAME.
  The flashing cursor shows the location for the input.
- By pressing the digit/alphabet keys (**7**) repeatedly you can select the desired name. To move the cursor to the next or previous position use the UP △ or DOWN ▽ keys (**8**).
- Press SND (**20**) again to store the name in the memory.

Notes:

– If the SND key (**20**) is pressed and no preset has been selected, the display will show NO PRES for two seconds.
– Programming is automatically interrupted if you fail to push any key within 1.5 minutes.

Changing a name

- Press the SND key (**20**). The first character of the existing name starts to flash.
- Enter the new name and press the SND key again to store it into the memory.

Erasing a name

- Press the SND key (**20**). The first character of the name starts to flash.
- You can now erase a character by moving the cursor to the desired position, after which you press the digit key 'YZ/I_I, 9' three times (I_I).
- Press the SND key (**20**) again. The name or character has now been erased

DISPLAY

- Press the DISPLAY key (**17**) to select the station name be shown on the display.
  If this key is pressed when the preset has no name, the display will show NO NAME and will then return to showing the frequency.
  If this key is pressed while no preset has been selected, the display will show NO PRES.

SCAN

- By pressing the SCAN key on the system remote control, you can scan all stored preset stations.
  The unit will now scan all stored preset stations, beginning with the current preset. You will hear 10 seconds of the program of each station.
  The display shows **SCAN** for two seconds and then, during the remaining 8 seconds, the preset number and frequency or name of the preset station that is being scanned.
- By pressing SCAN again, you can stop the scanning function at the preset station you wish to hear.
- The scanning function stops automatically when all presets have been scanned.

Note: If stations are too weak, the scanning function will not stop on these presets.

SLEEP

The sleep timer can be used to set a time period after which you wish your system to be switched to standby mode.

- Press the SLEEP key (**22**).
- The display shows the indication **SLEEP** and the message SLEEP 90 MN.
  This means that the system will be switched to standby after 90 minutes.
- Every time you press the SLEEP key again (within 4 seconds) the period will be decreased by 15 minutes: 75 MN -> 60 MN -> 45 MN -> 30 MN -> 15 MN -> OFF.
- When the SLEEP key (**22**) is pressed after the 15 minutes position the display will show SLEEP OFF and the **SLEEP** indication does not light up anymore.

Notes:

- During an active sleep timer period, you can reset the time to 90 MN again by pressing the SLEEP key (**22**).
- A sleep timer period will be cancelled when you switch your system to standby (with the standby key on your remote control).

DEMO MODE

- By pressing and holding the SLEEP key down for ***more than*** 3 seconds you can start a demonstration program.
  (When the SLEEP key (**22**) is pressed the receiver will first switch to the sleep mode and after 3 seconds to demo mode.)
- Several features of your receiver will now be shown one after another on the display (and on the volume control).
- The demo mode can be stopped:

– by pressing the SLEEP key (**22**) again
– by switching your receiver off with the POWER STANDBY/OFF key (**1**)
– or by switching to standby with the STANDBY key on your remote control.

ENHANCED SYSTEM INTELLIGENCE

If you have connected equipment to your receiver via the ESI sockets and when AUTO SELECT (**21**) is activated, there will be an additional internal communication between the different elements in your system.
The whole system can be operated by the system remote control through the sensor of the receiver.
In addition, the functions AUTOMATIC SOURCE SELECTION and AUTOMATIC STOP as mentioned below are then accessible:

IMPORTANT:
All products of the Philips 900 series which are equipped with their own remote control, also have an IR SENSOR ON/OFF switch on the back of the unit.
When these units are incorporated in your HiFi system with an ESI BUS connection, this IR SENSOR ON/OFF switch should always be in the **OFF** position.
The product can then be operated with the remote control of your FR940 receiver.
When these units are not used in a HiFi system the switch should be in the **ON** position.
Make sure that the respective unit is ***switched off*** when switching the IR SENSOR on and off.

AUTOMATIC SOURCE SELECTION

Equipment connected via the ESI sockets to the receiver is automatically selected as the source by pressing any button that activates the play functionon the external equipment (e.g. PLAY, SCAN, PRESET).

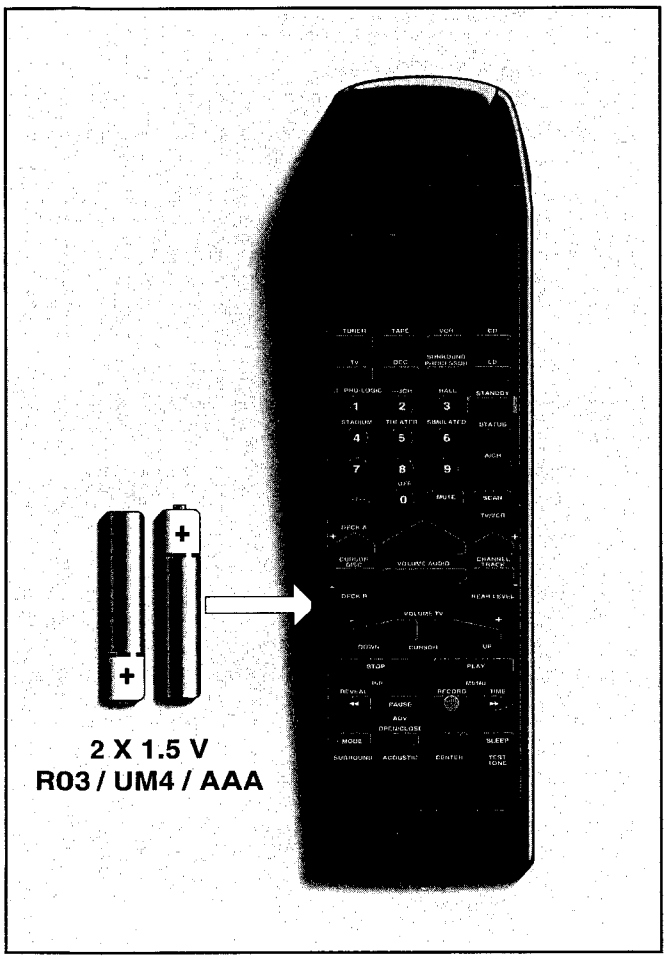
Example: If you press the PLAY key on your CD (Compact Disc) while listening to your tuner, the source CD will be selected.

AUTOMATIC STOP

When the selected source is in the play mode, it will always be stopped automatically as soon as another source is selected.

Example: If you select TUNER with the SOURCE SELECT knob (**3**) while listening to your CD, the CD player will be stopped.

English



The remote control (supplied) can be used to operate all units in the system which are connected via the ESI sockets. In addition, it can be used to operate any other equipment that uses the RC-5 remote control system.

Remote control from another room
You can control the system from another room by placing a EM 2200/2201 'Pyramid' remote-control receiver in the room you will be occupying and connecting it to the RC-5 input on the receiver/amplifier. The 'Pyramid' will pass signals from the remote-control handset to the receiver.

BATTERIES

- Open the battery compartment and insert two batteries as indicated, type R03, UM-4 or AAA-cells .
- Remove the batteries when they have run down or if the remote control will not be used again for a long period.

USING THE REMOTE CONTROL

- First select the source you wish to control by pressing one of the eight source select keys on the remote control (e.g. TAPE, CD, etc.).
- Then, select the desired function.

AMPLIFIER

- **VOLUME AUDIO** - for adjusting the volume
- **Source selectors**
- **MUTE** - for decreasing the volume by 20 dB
- **STANDBY** - for switching the complete system to standby (by pressing for longer than approx. 1 second).

TUNER

- **0-9 digit keys** - for selecting preset stations; entering data when using the direct tuning function
- **CHANNEL/TRACK** - next ⏶ or previous ⏷ preset station
- ◀◀ - to search down
- **SCAN** - for scanning preset stations
- **MODE** - for mono/stereo selection
- ▶▶ - to search up
- **STANDBY** - for selecting standby mode

TAPE

- **CHANNEL/TRACK** - next ⏶ or previous ⏷ track
- **SCAN** - for automatically playing the beginning of each track on a cassette
- **PLAY** - for starting play
- **STOP** - for stopping recording/play
- **PAUSE** - for interrupting recording/play
- **RECORD** - for starting recording
- ▶▶ - for winding the tape in the playing direction
- ◀◀ - for winding the tape in the opposite direction
- **DECK A/DECK B** - for selecting deck A or B
- **MODE** - for selecting the reverse mode
- **STANDBY** - for selecting standby mode

VCR

- **0-9 digit keys** - for selecting stations
- **CHANNEL/TRACK** - next ⏶ or previous ⏷ station
- **SCAN** - for scanning a tape
- **PLAY** - for starting playback
- **STOP** - for stopping recording/play
- **PAUSE** - for interrupting recording/play
- **RECORD** - for starting recording
- ▶▶ - for winding the tape
- ◀◀ - for rewinding the tape
- **MODE** - for language selection
- **STANDBY** - for selecting standby mode

CD

- **0-9 digit keys** - for track selection
- **CHANNEL/TRACK** - next ⏶ or previous ⏷ track
- ◀◀ - to search down
- ▶▶ - to search up
- **SCAN** - for automatically playing the beginning of each track
- **PLAY** - for starting play
- **STOP** - for stopping play
- **PAUSE** - for interrupting play
- **OPEN/CLOSE** - for opening and closing the disc compartment
- **MODE** - for playing in random order (SHUFFLE)
- **DISC + –** (CD changer only) - for disc selection
- **STANDBY** - for selecting standby mode

TV

- **VOLUME TV** - for adjusting the volume
- **0-9 digit keys** - for selecting preset stations
- **A/CH** - to switch back to the previously selected station
- **TV/VCR** - switches the TV input (RF) to VCR mode and back
- **CHANNEL/TRACK** - for next ⌃ or previous ⌄ preset station
- **PIP** - Picture in Picture
- **MENU** - to enter the menu mode
- ≪ - decrement
  - moves the cursor down when in menu mode
- ≫ - increment
  - moves the cursor up when in menu mode
- **STATUS** - to display user information on the TV screen (On Screen Display)
- **ADV.** - selects out off a menu structure
- **MODE** - for language selection
- **STANDBY** - for selecting standby mode

DCC

- **0-9 digit keys** - for track selection
- **CHANNEL/TRACK** - next ⌃ or previous ⌄ track
- **SCAN** - for automatically playing the beginning of each track on a cassette
- **PLAY** - for starting play
- **STOP** - for stopping recording/play
- **PAUSE** - for interrupting recording/play
- ▸▸ - for winding the tape in the playing direction
- ◂◂ - for winding the tape in the opposite direction
- **MODE** - for selecting the reverse mode
- **STANDBY** - for selecting standby mode

SURROUND PROCESSOR

- □□ **PRO LOGIC, ---3CH, HALL, STADIUM, THEATER, SIMULATED** - for selecting the different surround modes
- **OFF** - for switching the surround mode off
- **SURROUND, ACOUSTIC, CENTER** - selecting the cursor mode in case you wish to adjust the different surround modes
- ∨ **DOWN CURSOR UP** ∧ - these keys are used in combination with the SURROUND, ACOUSTIC and CENTER keys in case you wish to adjust various settings of the surround modes.
  See also chapter **SURROUND MODE**
- **CURSOR +/-** - these keys are used in combination with the SURROUND, ACOUSTIC and CENTER keys in case you wish to adjust various settings of the surround modes.
  See also chapter **SURROUND MODE**
- **TEST TONE** - for checking the output level of the front, center and rear speakers.
- **REAR LEVEL +/-** - for adjusting the rear level (related to front level)

LD

- **0-9 digit keys** - for track selection
- **CHANNEL/TRACK** - next ⌃ or previous ⌄ track
- ◂◂ - to search down
- ▸▸ - to search up
- **SCAN** - for automatically playing the beginning of each track
- **PLAY** - for starting play
- **STOP** - for stopping play
- **PAUSE** - for interrupting play
- **OPEN/CLOSE** - for opening and closing the disc compartment
- **MODE** - for playing in random order (SHUFFLE)
- **STANDBY** - for selecting standby mode

MAINTENANCE

- Do not leave the unit for any length of time in direct sunlight or other places where high temperatures can occur, such as in the vicinity of a heating apparatus.
- Do not expose the equipment to humidity or rain.
- A chamois leather cloth, slightly moistened with water is sufficient for cleaning the cabinet
- Do not use cleaning agents containing alcohol, spirits, ammonia or abrasives.

(GB) TECHNICAL SPECIFICATIONS

English

(Subject to modification)

AMPLIFIER SECTION

- Output power: (left/right)
  .....IEC (D<0.7%) 63 Hz - 12.5 kHz 2x115 W (8 Ω)
- Surround channel
  .....IEC (D<0.7%) 1 kHz 22 W (8 Ω)
- Center .....IEC (D<0.7%) 1 kHz 22 W (8 Ω)
- Music Power (1 kHz, 8 Ω) .....250 W
- Total harmonic distortion:
  ..... 0.01% at 1 kHz
- Intermodulation distortion: 0.03%
- Power bandwidth: .....10 - 50,000 Hz (at -3dB)
- Frequency response:
  linear inputs .....10 - 30,000 Hz, ± 1 dB
  phono input .....20 - 20,000 Hz, ± 1 dB
- Signal-to-Noise Ratio:
  linear .....≥ 95 dBA
  phono .....≥ 78 dBA
- Stereo separation: .....≥ 65 dB
- Crosstalk .....≥ 85 dB
- Damping factor .....≥ 100 at 8 Ω
- Bass/Treble control
  .....+/- 10 dB at 100 Hz/10 kHz
- Acoustic bass .....+2/4/6/8/10 dB at 80/150/250 Hz

INPUT SENSITIVITY

Phono MM: .....2.5 mV at 47 kΩ (rated output)
Linear inputs: .....150 mV at 22 kΩ (rated output)
Digital input: .....500 mV p-p

OUTPUTS

Recording: .....150 mV at 2.5 kΩ
Headphones: .....8 - 1,000 Ω
Loudspeakers: .....8-16 Ω
Digital out: .....500 mV p-p

POWER SUPPLY

Mains voltages: .....acc. to typeplate
Power consumption: .....200 W
Mains outlets: .....50 W max.

(Subject to modification)

TUNER SECTION

- Wave range FM: .....87.5 - 108 MHz
- Sensitivity : .....13.5 dBf
- Adjacent Channel Selectivity: .....60 dB (400 kHz)
- Total harmonic distortion
  (mono/stereo: 0.2%/0.4%
- Frequency response: .....30 - 15,000 Hz +/-1.5 dB
- S/N ratio: mono/stereo .....80/72 dB
- Channel separation: .....45 dB at 1 kHz
- IF-suppression .....70 dB
- Image rejection: .....50 dB
- Wave range AM: .....530 - 1,710 kHz
- Sensitivity
  26 dB S/N: .....500 µV/m

GENERAL

REMOTE CONTROL SYSTEM

.....Enhanced System Intelligence BUS
.....+ RC-5 BUS

CABINET

Dimensions (w x h x d):
.....435 x 124 x 300 mm approx.
Weight: .....9.2 kg approx.

ACCESSORIES

.....1 x Remote control,
..... 2 x Remote control cable
.....2 x 'AAA' battery
.....AM Loop Antenna
.....FM T-bar Antenna